

NMEC Working Group

Tuesday, June 4, 2019 at 1:00-5:00pm

Hosted by CPUC and PG&E

Facilitated by Michelle Vigen Ralston, Common Spark Consulting



*Pacific Gas and
Electric Company*[®]



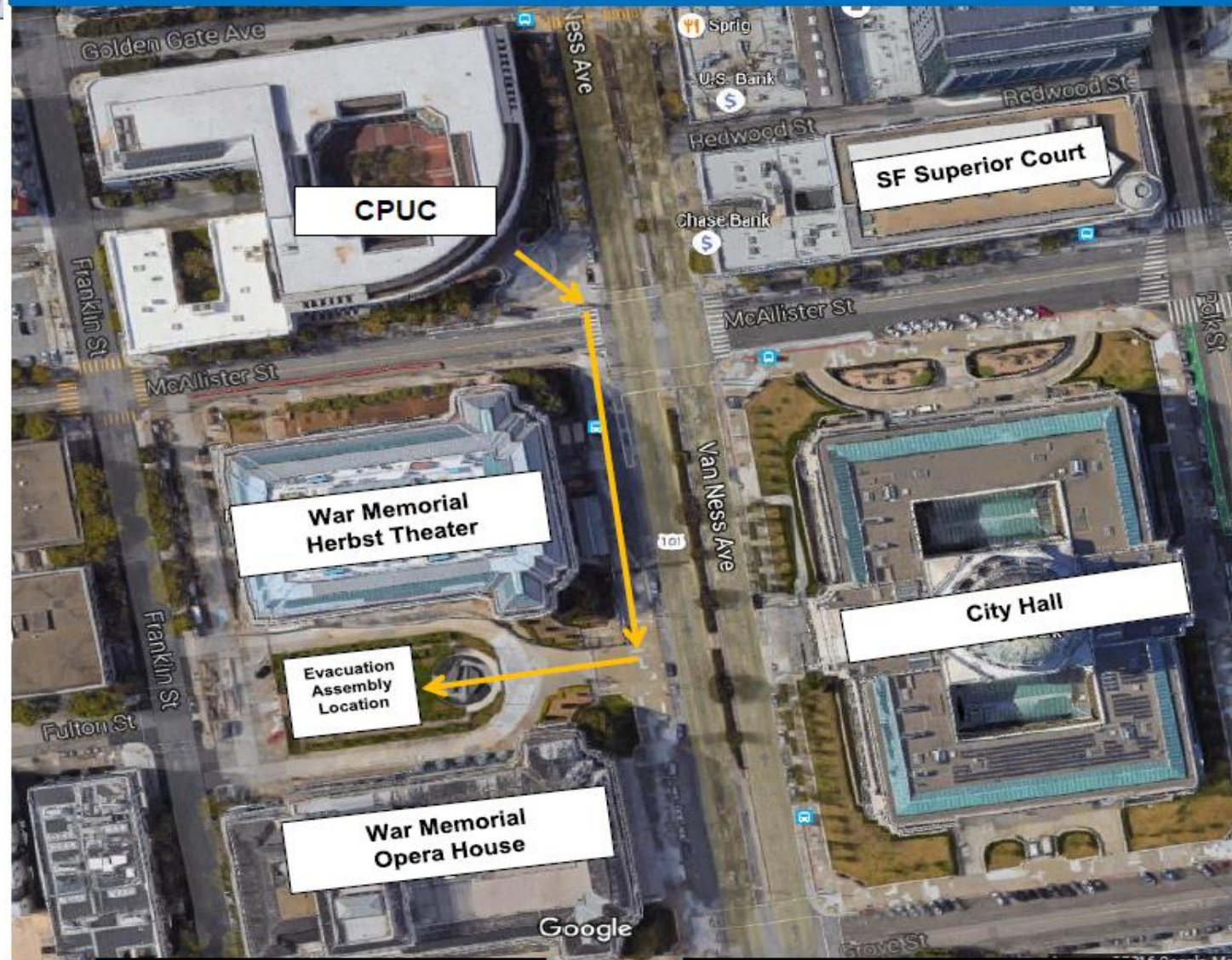
Safety and Emergency Information

- In the event of an emergency, please proceed calmly out the exits.
- The evacuation site is the Garden Plaza area between Herbst Theater and the War Memorial Opera House Buildings, on Van Ness
- Exit the building at the Main Entrance at Van Ness and McAllister streets, cross McAllister Street, pass Herbst Theater and enter the plaza.





Evacuation Assembly Location



NMEC Working Group

Tuesday, June 4, 2019 at 1:00-5:00pm

Hosted by CPUC and PG&E

Facilitated by Michelle Vigen Ralston, Common Spark Consulting



*Pacific Gas and
Electric Company*[®]

Agenda

Today's Objective: Review/refine and test/confirm any consensus recommendations

1:00 **Introductions and Welcome**

1:30 Presentation of Draft Outcomes/Recommendations

2:00 Small Group Breakout – Session 1

2:45 Break

3:00 Small Group Breakout – Session 2

3:45 Report Back

4:30 Wrap-up/Next Steps

Final Meeting: Webinar Wednesday, June 12 from 1:00-2:00pm

Logistics

Keep in mind: There is an active solicitation process going on – PAs and implementers should refrain from any discussion potentially related to the solicitations or a specific proposal – current and future.

Webinar Participants: We will do our best to offer clear remote participation.

- Slides (case sensitive): <http://bit.ly/NMEC-WG-June4Slides>
- Small Group Conference Lines
 - Defining Pop-NMEC: 270-240-0886, code: 740-203-083 (Host: CM Francis)
 - All-Things Modeling: 857-232-0476, code: 184-602 (Host: M Ralston)
 - Process & Roles: 270-240-0886, code: 744-855-392 (Host: Webinar/B Smith)



Welcome

Coby Rudolph, CPUC

- Thank you for your participation
- Jan 31 ruling called for:
 - NMEC Working Group made up of stakeholders to advise on rules for NMEC-based programs
 - Initial focus on rules for programs using Population-level NMEC
- Current priority: Initial rules for Population-level NMEC
 - What needs to be put in place now as 3P process moves forward toward initial launches in 2020?
 - We will learn more as programs launch and savings are measured/claimed/evaluated





Welcome

Coby Rudolph, CPUC

- Recommendations should:
 - Be based on participants' expertise and known best practices
 - Propose recommended guidelines *and* areas for further study
- Potential approach: Rules/guardrails & room for exceptions





Welcome

Coby Rudolph, CPUC

CPUC process... after Working Group report:

- CPUC to issue draft Rulebook with Population-level NMEC rules
- Parties will be able to submit comments on the record
- CPUC to finalize Population-level rules



Quick Recap of Activities

- Meeting 1: May 6
 - Over 70 participants across government, PA, third-party, contractor, consultant, NGO
 - Definition and delineation of “population-level NMEC”
 - 65+ Responses to the Survey/Work Group Sign-up
- Meeting 2: May 15
 - Additional work on definition of Population-Level NMEC
 - Determined three areas for developing guidance:
 - [Definition and Population Eligibility](#)
 - [Modeling Guidance](#)
 - [Process and Roles for Determining Savings](#)
- Small Group work
 - Google documents (see links above)
 - Small Group calls held May 29-30th

Quick Recap of Activities

- Meeting 3: Today
 - Update on high-level consensus recommendations, guidance for population-level NMEC
 - Small Group time to confirm, refine, and test recommendations; propose any additional high-consensus items
 - Today's conversations, small group outcomes/report outs + Google Doc + Small Group Calls + Webinar notes → Draft Working Group Report
 - High-consensus items, Medium-consensus items
 - Priority questions and issues
- Meeting 4: June 12 webinar at 1:00-2:00pm
 - Presentation of Draft Report highlights

Agenda

Today's Objective: Review/refine and test/confirm any consensus recommendations

1:00 Introductions and Welcome

1:30 Presentation of Draft Outcomes/Recommendations

2:00 Small Group Breakout – Session 1

2:45 Break

3:00 Small Group Breakout – Session 2

3:45 Report Back

4:30 Wrap-up/Next Steps

Final Meeting: Webinar Wednesday, June 12 from 1:00-2:00pm

Recommendations...So Far

- Recommendations under the three areas
- Small Groups will be asked to confirm, refine, and strengthen/clarify recommendations
 - Each Small Group will receive these printed out along with some questions to respond to and bring back to the group for presentation and feedback.
 - Two rounds of breakouts – so you can stick with the same group or switch it up.
 - Identify a “pen holder” to note the conversations and any amendments to the recommendations.

Big question: Are these sufficient guidance to support advancing population-level NMEC in the next year?

Defining Population-Level NMEC; Population/Aggregation Eligibility

- Recommendation #1: Definition of Population-Level NMEC

Population NMEC is an energy savings calculation approach in which results are based on energy usage data observed at the meter, and aggregated across a portfolio/program/population rather than a modeled engineering forecast or deemed value.

Characteristics of Population NMEC Programs

- *For a Population NMEC program, savings may aggregate site-level estimates where all sites use the same modeling methods; or savings may be pooled, modeling savings across a population.*
- *Population NMEC uses a consistent approach to measure savings across all sites within a specific program means that the same data collection, processing, and analytical methods should be applied to all participating sites to obtain the aggregate result for a specific program.*
- *Data from all sites are collected and prepared for analysis the same way; same data collected from all sites, and data are treated consistently (i.e., same rules to determine outliers). Values may differ across sites.*
- *Population NMEC programs are those in which savings are claimed for an aggregate or portfolio of sites with similar characteristics.*

Defining Population-Level NMEC; Population/Aggregation Eligibility

- Recommendation #2: Population/Aggregation Eligibility
 1. *To use a Population NMEC approach, the number of sites should be sufficient to have fractional savings uncertainty no more than +/- 50% at at least a 90% confidence level.*
 - *Fractional Savings Uncertainty (FSU) is the uncertainty of a savings estimate expressed as a fraction of savings. It is expressed at a particular confidence level (e.g., 90% confidence that savings will be within 50% of the point estimate). ASHRAE Guideline 14 provides a formula for calculating FSU.*
 - *Example: A savings estimate of 10 MW with a 90% confidence interval of 6 to 14 MW (+/-4) would have FSU of 40% at the 90% confidence level*
 - *FSU is proportional to the CV (coefficient of variance) of the baseline model and inversely proportional to the amount of savings.*
 - *Will guide size of population (larger the cohort, more accurate the savings, all other things being equal)*
 - *This recommendation is based on the ASHRAE Guideline 14, which requires 50% savings uncertainty with 68% confidence level for whole building level.*
 2. *Sites in the population should have some common driver or factor, qualitative or quantitative, that contribute to the above threshold of confidence and savings certainty, and supports aggregation on a conceptual level.*

Modeling and Methodology

- Recommendation #1: Model/Methodology Transparency and Access

Any methodology including calculations used should be available for verification, replicability, and evaluation.

- *May be public or open-source, or at least available for the above verification activities.*
- *Ideally, the methodology would have demonstrated performance based on test data.*

- Recommendation #2: M&V Plan Template

Use a basic template to ensure every M&V Plan that is submitted with the Implementation Plan includes certain aspects.

- *Use the site-level NMEC rulebook as general guidance of what to include in the Population NMEC M&V Plan.*

Modeling and Methodology

- Recommendation #3: Require consideration of certain specifications, do not establish threshold requirements.

No specific modeling requirements are recommended at this time, but the group has recommended some criteria that ought to be considered and addressed in an M&V plan, including:

- *Normalizing for Weather and other Factors: How does the program normalize for weather? Does the program also normalize for other factors? If so, how?*
- *Comparison Groups and Baseline: Does the program utilize a comparison group? If so, for what purposes? How is the comparison group composed?*
- *Outlier Site Identification and Treatment: Under what condition(s) will a site be excluded from a population-based program after enrollment, and who should get to decide?*
- *Non-Routine Event Identification and Treatment: Does the program allow for NREs and adjustments, and if so of what magnitude, and what types of change(s) to building use or other factors will qualify for allowing a non-routine adjustment to be made? What type of documentation and verification will be required for a non-routine adjustment, what criteria will be used to determine whether the adjustment or treatment it is sufficient?*

Process and Roles

- Recommendation #1: Establish Terms and Definitions for Savings Terms

Ex Ante Forecast Savings: Submitted by the Implementer to the PA at the proposal stage, best available estimate without having post-installation meter data from participating sites. May use DEER values, engineering estimates, or information from prior program years.

Ex Ante Claimable Savings: Submitted by the PA to the CPUC, finalized with the approval of the M&V and Implementation Plan

Payable Savings: Determined via the approved M&V and Implementation Plan (negotiated between the PA and implementer, approved by CPUC), constitutes the basis of payments between the PA and implementer. Ideally, based at least in part on meter-based savings (in real time or trued up)

- *May or may not be the same as claimable, but encouraged to be similar/same (move in that direction)*

Ex Post (Evaluated) Savings: Determined by the CPUC in separate third-party evaluation process

Process and Roles

- Recommendation #2: Move towards common data sets being used across different savings determinations.

Recognize in the early population NMEC programs the benefit of being able to use the same data sets across different savings determinations, and work towards cooperation across implementers, PAs, CPUC, and evaluators to move in that direction.

- Recommendation #3: Encourage, but do not require Pay for Performance?

It is encouraged that at least some portion of payments to implementers be based on NMEC-measured performance. No minimum threshold is recommended at this time to allow for the greatest flexibility and innovation, however it is encouraged and expected that payments based on NMEC-measured performance will increase over time as the market gains experience.

Small Groups Breakout

- Small Groups will be asked to confirm, refine, and strengthen recommendations
 - Each Small Group will receive these printed out along with some questions to respond to and bring back to the group for presentation and feedback.
 - Two rounds of breakouts – so you can stick with the same group or switch.
 - Identify a “pen holder” to note the conversations and any amendments to the recommendations.

Big question: Are these sufficient guidance to support advancing population-level NMEC in the next year?

Agenda

Today's Objective: Review/refine and test/confirm any consensus recommendations

1:00 Introductions and Welcome

1:30 Presentation of Draft Outcomes/Recommendations

2:00 Small Group Breakout – Session 1

2:45 Break

3:00 Small Group Breakout – Session 2

3:45 Report Back

4:30 Wrap-up/Next Steps

Final Meeting: Webinar Wednesday, June 12 from 1:00-2:00pm

Small Group Session 1

Keep in mind: There is an active solicitation process going on – PAs and implementers should refrain from any discussion potentially related to the solicitations or a specific proposal – current and future.

Webinar Participants: We will do our best to offer clear remote participation.

- Slides (case sensitive): <http://bit.ly/NMEC-WG-June4Slides>
- Small Group Conference Lines
 - Defining Pop-NMEC: 270-240-0886, code: 740-203-083 (Host: CM Francis)
 - All-Things Modeling: 857-232-0476, code: 184-602 (Host: M Ralston)
 - Process & Roles: 270-240-0886, code: 744-855-392 (Host: Webinar/B Smith)

Agenda

Today's Objective: Review/refine and test/confirm any consensus recommendations

- 1:00 Introductions and Welcome
- 1:30 Presentation of Draft Outcomes/Recommendations
- 2:00 Small Group Breakout – Session 1
- 2:45 Break**
- 3:00 Small Group Breakout – Session 2
- 3:45 Report Back
- 4:30 Wrap-up/Next Steps

Final Meeting: Webinar Wednesday, June 12 from 1:00-2:00pm

Agenda

Today's Objective: Review/refine and test/confirm any consensus recommendations

- 1:00 Introductions and Welcome
- 1:30 Presentation of Draft Outcomes/Recommendations
- 2:00 Small Group Breakout – Session 1
- 2:45 Break
- 3:00 Small Group Breakout – Session 2**
- 3:45 Report Back
- 4:30 Wrap-up/Next Steps

Final Meeting: Webinar Wednesday, June 12 from 1:00-2:00pm

Small Group Session 2

Keep in mind: There is an active solicitation process going on – PAs and implementers should refrain from any discussion potentially related to the solicitations or a specific proposal – current and future.

Webinar Participants: We will do our best to offer clear remote participation.

- Slides (case sensitive): <http://bit.ly/NMEC-WG-June4Slides>
- Small Group Conference Lines
 - Defining Pop-NMEC: 270-240-0886, code: 740-203-083 (Host: CM Francis)
 - All-Things Modeling: 857-232-0476, code: 184-602 (Host: M Ralston)
 - Process & Roles: 270-240-0886, code: 744-855-392 (Host: Webinar/B Smith)

Agenda

Today's Objective: Review/refine and test/confirm any consensus recommendations

- 1:00 Introductions and Welcome
- 1:30 Presentation of Draft Outcomes/Recommendations
- 2:00 Small Group Breakout – Session 1
- 2:45 Break
- 3:00 Small Group Breakout – Session 2
- 3:45 Report Back**
- 4:30 Wrap-up/Next Steps

Final Meeting: Webinar Wednesday, June 12 from 1:00-2:00pm

Small Group Report Outs: Defining

Small Groups to present:

1. What recommendations are solid? Did you make any revisions to make them stronger?
2. What recommendations need more work?
3. Are the guidelines sufficient for supporting population-level NMEC programs in the next year? What else is needed?

Does the rest of the NMEC Working Group agree/disagree?

Small Group Report Outs: Modeling/Methods

Small Groups to present:

1. What recommendations are solid? Did you make any revisions to make them stronger?
2. What recommendations need more work?
3. Are the guidelines sufficient for supporting population-level NMEC programs in the next year? What else is needed?

Does the rest of the NMEC Working Group agree/disagree?

Small Group Report Outs: Process and Roles

Small Groups to present:

1. What recommendations are solid? Did you make any revisions to make them stronger?
2. What recommendations need more work?
3. Are the guidelines sufficient for supporting population-level NMEC programs in the next year? What else is needed?

Does the rest of the NMEC Working Group agree/disagree?

Agenda

Today's Objective: Review/refine and test/confirm any consensus recommendations

- 1:00 Introductions and Welcome
- 1:30 Presentation of Draft Outcomes/Recommendations
- 2:00 Small Group Breakout – Session 1
- 2:45 Break
- 3:00 Small Group Breakout – Session 2
- 3:45 Report Back
- 4:30 Wrap-up/Next Steps**

Final Meeting: Webinar Wednesday, June 12 from 1:00-2:00pm

What next?

- Facilitation Team will be consolidating input from throughout the process and the work and feedback from today into a draft report
- High-level outcomes will be presented at the final June 12 webinar
 - Wednesday, June 12 at 1:00-2:00pm
 - Will send Webinar info out with this meeting's follow-up
- Draft report will go to CPUC:
 - May move recommendations into a Ruling or other on-the-record vehicle for public comment and/or submit as changes to the Rulebook proposed for public comment

Thank you & Contact Info

- Coby Rudolph, CPUC
- Caroline Massad Francis, PG&E
- Michelle Vigen Ralston, Common Spark (facilitator)

Working Group Contact: michelle@common-spark.com

Slides from today (case sensitive): http://bit.ly/NMECWG_June4Slides

Next/Final Webinar: Wednesday, June 12 from 1:00-2:00pm

Reference: Working Group Process

- ✓ Meeting 1 (May 6 webinar): Intro, Scope, Definition of Population-level NMEC
- ✓ Meeting 2 (May 15 webinar): Confirm Definition, Propose “buckets” of priority topics
- ✓ Between Meetings: Development of Straw Proposals
 - ✓ Working Group members to volunteer proposals and ideas in writing to Michelle and in small groups
 - ✓ Michelle may convene calls with small groups if there's a wide range of positions
- Meeting 3 (June 4 in-person @ CPUC): Present straw proposals, breakout groups to refine and present revisions, straw poll on consensus
- Meeting 4 (June 12 webinar): Update on final results